(19) World Intellectual Property Organization International Bureau





(43) International Publication Date 14 February 2002 (14.02.2002)

PCT

(10) International Publication Number WO 02/12340 A2

(51) International Patent Classification7: C07K 14/705

(21) International Application Number: PCT/US01/24217

(22) International Filing Date: 1 August 2001 (01.08.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

٠.			
	60/223,269	3 August 2000 (03.08.2000)	US
	60/224,456	10 August 2000 (10.08.2000)	US
	60/226,410	18 August 2000 (18.08.2000)	US
	60/228,140	25 August 2000 (25.08.2000)	US
	60/230,067	31 August 2000 (31.08.2000)	US
	60/231,434	8 September 2000 (08.09.2000)	US

(71) Applicant (for all designated States except US): INCYTE GENOMICS, INC. [US/US]; 3160 Porter Drive, Palo Alto, CA 94304 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): YUE, Henry [US/US]; 826 Lois Avenue, Sunnyvale, CA 94087 (US). THORNTON, Michael [US/US]; 9 Medway Road, Woodside, CA 94062 (US). RAMKUMAR, Jayalaxmi [IN/US]; 34359 Maybird Circle, Fremont, CA 94555 (US). TANG, V., Tom [US/US]; 4230 Ranwick Court, San Jose, CA 95118 (US). AZIMZAI, Yalda [US/US]; 5518 Boulder Canyon Drive, Castro Valley, CA 94522 (US). BAUGHN, Mariah, R. [US/US]; 14244 Santiago Road, San Leandro, CA 94577 (US). YANG, Junming [CN/US]; 7125 Bank Lanc, San Jose, CA 95129 (US). YAO, Monique, G. [US/US]; 111 Frederick Court, Mountain View, CA 94043 (US). LAL, Preeti [IN/US]; P.O. Box 5142, Santa Clara, CA 95056 (US), WALIA, Narinder, K. [US/US]; 890 Roble Avenue #1, San Leandro, CA 94577 (US). GANDHI, Ameena, R. [US/US]; 837 Roble Avenue, #1, Menlo Park, CA 94025 (US). HAFALIA, April, J., A. [US/US]; 2227 Calle de Primavera, Santa Clara, CA 95054 (US). NGUYEN, Danniel, B. [US/US]; 1403 Ridgewood Drive, San Jose, CA 95118 (US). PATTER-SON, Chandrea [US/US]; 490 Sherwood Way #1, Menlo Park, CA 94025 (US). ELLIOTT, Vicki, S. [US/US]: 3770 Polten Place Way, San Jose, CA 95121 (US). TRI-BOULEY, Catherine, M. [FR/US]; 1121 Tennessee,

#5, San Francisco, CA 94107 (US). LU, DYUNG, Aina, M. [US/US]; 233 Coy Drive, San Jose, CA 95123 (US). XU, Yuming [US/US]; 1739 Walnut Drive, Mountain View, CA 94040 (US). REDDY, Roopa [IN/US]; 1233 W. McKinely Avenue #3, Sunnyvale, CA 94086 (US). HER-NANDEZ, Roberto [GB/GB]; 160 Pine Tree Avenue. Canterbury Kent, CT2 7SZ (GB). BOROWSKY, Mark, L. [US/US]; 122 Orchard Avenue, Redwood City, CA 94061 (US). LO, Terence, P. [CA/US]; 1451 Beach Park Boulevard, Apt. 115, Foster City, CA 94404 (US). LU, Yan [CN/US]; 3885 Corrina Way, Palo Alto, CA 94303 (US). POLICKY, Jennifer, L. [US/US]; 1511 Jarvis Court, San Jose, CA 95118 (US). GREENE, Barrie, D. [US/US]; 1332 10th Avenue #104, San Franciso, CA 94122 (US). SANJANWALA, Madhu, S. [US/US]; 210 Sylvia Court, Los Altos, CA 94024 (US). RAUMANN, Brigitte, E. [US/US]; 5801 South Dorchester Avenue #3B, Chicago, IL 60637 (US). BURFORD, Neil [GB/US]; 105 Wildwood Circle, Durham, CT 06422 (US). ISON, Craig, H. [US/US]; 1242 Weathersfiedl Way, San Jose, CA 95118 (US). LEE, Ernestine, A. [US/US]; 624 Kains Street, Albany, CA 94706 (US). DING, Li [CN/US]; 3353 Alma Street #146, Palo Alto, CA 94306 (US). DAS, Debopriya [IN/US]; 1179 Bonita Avenue Apt. 3, Mountain View, CA 94040 (US). KALLICK, Deborah, A. [US/US]; 900 Olive Street, Menlo Park, CA 94025 (US). KHAN, Farrah, A. [IN/US]; 3617 Central Road #102, Glenview. IL 60025 (US). SEILHAMER, Jeffrey, J. [US/US]; 12555 La Cresta, Los Altos, CA 94022 (US).

- (74) Agents: HAMLET-COX, Diana et al.; Incyte Pharmaceuticals, Inc., 3160 Porter Drive, Palo Alto, CA 94304 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: TRANSPORTERS AND ION CHANNELS

(57) Abstract: The invention provides human transporters and ion channels (TRICH) and polynucleotides which identify and encode TRICH. The invention also provides expression vectors, host cells, antibodies, agonists, and antagonists. The invention also provides methods for diagnosing, treating, or preventing disorders associated with aberrant expression of TRICH.





WO 02/12340 A2



Published:

 without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 02/12340 PCT/US01/24217

```
Gly Leu Ala Asp Cys Phe Leu Lys Thr Tyr Asn Gln Val Gly Ile
                 50
                                      55
Arg Gly Leu Tyr Arg Gly Thr Ser Pro Ala Leu Leu Ala Tyr Val
                                      70
Thr Gln Gly Ser Val Leu Phe Met Cys Phe Gly Phe Cys Gln Gln
                 80
                                      85
Phe Val Arg Lys Val Ala Arg Val Glu Gln Asn Ala Glu Leu Asn
                 95
                                     100
Asp Leu Glu Thr Ala Thr Ala Gly Ser Leu Ala Ser Ala Phe Ala
                110
                                     115
Ala Leu Ala Leu Cys Pro Thr Glu Leu Val Lys Cys Arg Leu Gln
                125
                                     130
Thr Met Tyr Glu Met Lys Met Ser Gly Lys Ile Ala Gln Ser Tyr
                140
                                     145
                                                         150
Asn Thr Ile Trp Ser Met Val Lys Ser Ile Phe Met Lys Asp Gly
                155
                                     160
Pro Leu Gly Phe Tyr Arg Gly Leu Ser Thr Thr Leu Ala Gln Glu
                170
                                     175
Ile Pro Gly Tyr Phe Phe Tyr Phe Gly Gly Tyr Glu Ile Ser Arg
                185
                                     190
Ser Phe Phe Ala Ser Gly Gly Ser Lys Asp Glu Leu Gly Pro Val
                200
                                     205
Pro Leu Met Leu Ser Gly Gly Phe Ala Gly Ile Cys Leu Trp Leu
                215
                                     220
                                                         225
Ile Ile Phe Pro Val Asp Cys Ile Lys Ser Arg Ile Gln Val Leu
                230
                                     235
Ser Met Phe Gly Lys Pro Ala Gly Leu Ile Glu Thr Phe Ile Ser
                245
                                     250
                                                         255
Val Val Arg Asn Glu Gly Ile Ser Ala Leu Tyr Ser Gly Leu Lys
                260
                                     265
                                                         270
Ala Thr Leu Ile Arg Ala Ile Pro Ser Asn Ala Ala Leu Phe Leu
                275
                                     280
Val Tyr Glu Tyr Ser Arg Lys Met Met Asn Met Val Glu Glu
                290
                                     295
Tyr
<210> 28
<211> 515
<212> PRT
<213> Homo sapiens
<220>
<221> misc_feature
<223> Incyte ID No: 7481461CD1
<400> 28
Met Val Leu Ser Gln Glu Glu Pro Asp Ser Ala Arg Gly Thr Ser
                                     10
Glu Ala Gln Pro Leu Gly Pro Ala Pro Thr Gly Ala Ala Pro Pro
                 20
                                     25
                                                          30
Pro Gly Pro Gly Pro Ser Asp Ser Pro Glu Ala Ala Val Glu Lys
                 35
                                      40
Val Glu Val Glu Leu Ala Gly Pro Ala Thr Ala Glu Pro His Glu
                                     55
                                                          60
Pro Pro Glu Pro Pro Glu Gly Gly Trp Gly Trp Leu Val Met Leu
                 65
                                     70
Ala Ala Met Trp Cys Asn Gly Ser Val Phe Gly Ile Gln Asn Ala
                 80
                                     85
Cys Gly Val Leu Phe Val Ser Met Leu Glu Thr Phe Gly Ser Lys
                 95
                                    100
                                                         105
Asp Asp Asp Lys Met Val Phe Lys Thr Ala Trp Val Gly Ser Leu
```

115

110

WO 02/12340 PCT/US01/24217

```
Ser Met Gly Met Ile Phe Phe Cys Cys Pro Ile Val Ser Val Phe
                125
                                    130
Thr Asp Leu Phe Gly Cys Arg Lys Thr Ala Val Val Gly Ala Ala
                140
                                    145
Val Gly Phe Val Gly Leu Met Ser Ser Ser Phe Val Ser Ser Ile
                155
                                    160
Glu Pro Leu Tyr Leu Thr Tyr Gly Ile Ile Phe Ala Cys Gly Cys
                170
                                     175
Ser Phe Ala Tyr Gln Pro Ser Leu Val Ile Leu Gly His Tyr Phe
                185
                                    190
Lys Lys Arg Leu Gly Leu Val Asn Gly Ile Val Thr Ala Gly Ser
                200
                                     205
Ser Val Phe Thr Ile Leu Leu Pro Leu Leu Leu Arg Val Leu Ile
                215
                                     220
                                                         225
Asp Ser Val Gly Leu Phe Tyr Thr Leu Arg Val Leu Cys Ile Phe
                230
                                     235
Met Phe Val Leu Phe Leu Ala Gly Phe Thr Tyr Arg Pro Leu Ala
                245
                                    250
                                                         255
Thr Ser Thr Lys Asp Lys Glu Ser Gly Gly Ser Gly Ser Ser Leu
                260
                                     265
Phe Ser Arg Lys Lys Phe Ser Pro Pro Lys Lys Ile Phe Asn Phe
                275
                                     280
Ala Ile Phe Lys Val Thr Ala Tyr Ala Val Trp Ala Val Gly Ile
                290
                                     295
Pro Leu Ala Leu Phe Gly Tyr Phe Val Pro Tyr Val His Leu Met
                305
                                     310
Lys His Val Asn Glu Arg Phe Gln Asp Glu Lys Asn Lys Glu Val
                320
                                    325
                                                         330
Val Leu Met Cys Ile Gly Val Thr Ser Gly Val Gly Arg Leu Leu
                335
                                    340
Phe Gly Arg Ile Ala Asp Tyr Val Pro Gly Val Lys Lys Val Tyr
                                    355
                350
Leu Gln Val Leu Ser Phe Phe Phe Ile Gly Leu Met Ser Met Met
                365
                                    370
Ile Pro Leu Cys Ser Ile Phe Gly Ala Leu Ile Ala Val Cys Leu
                380
                                    385
Ile Met Gly Leu Phe Asp Gly Cys Phe Ile Ser Ile Met Ala Pro
                395
                                    400
Ile Ala Phe Glu Leu Val Gly Ala Gln Asp Val Ser Gln Ala Ile
                410
                                    415
Gly Phe Leu Leu Gly Phe Met Ser Ile Pro Met Thr Val Gly Pro
                425
                                    430
Pro Ile Ala Gly Leu Leu Arg Asp Lys Leu Gly Ser Tyr Asp Val
                440
                                    445
                                                         450
Ala Phe Tyr Leu Ala Gly Val Pro Pro Leu Ile Gly Gly Ala Val
                455
                                    460
                                                         465
Leu Cys Phe Ile Pro Trp Ile His Ser Lys Lys Gln Arg Glu Ile
                470
                                     475
Ser Lys Thr Thr Gly Lys Glu Lys Met Glu Lys Met Leu Glu Asn
                485
                                    490
Gln Asn Ser Leu Leu Ser Ser Ser Ser Gly Met Phe Lys Lys Glu
                500
                                    505
Ser Asp Ser Ile Ile
                515
<210> 29
<211> 1519
<212> PRT
<213> Homo sapiens
<220>
<221> misc_feature
```

<223> Incyte ID No: 7472541CD1